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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/024,341	12/21/2001	Yasumasa Ooya	086531-0132	4741

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FOLEY AND LARDNER
SUITE 500
3000 K STREET NW
WASHINGTON, DC 20007

EXAMINER

KALAFUT, STEPHEN J

ART UNIT	PAPER NUMBER
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1745

DATE MAILED: 06/23/2003

6

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicati n No.

10/024,341

Applicant(s)

OOYA ET AL.

Examiner

Stephen J. Kalafut

Art Unit

1745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) none. 6) ☐ Other: _____.

Art Unit: 1745

Claim 5 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. This claim further limits the size of the carbon particles of claim 1. However, whether the claim requires that the adhered particles are of carbon and not of an oxide is unclear.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Suzuki *et al.* (JP 6-236,756), cited by applicants.

Suzuki *et al.* disclose an electrode material for a nonaqueous cell, where lithium is the other electrode (section 0006). This would mean that lithium is the negative electrode material, while the inventive material of Suzuki *et al.* is for the positive electrode. This material includes an active lithium transition metal oxide (section 0008) and superfine particles of a material such as Al_2O_3 , in sizes below 3 microns, preferably between 0.2 and 0.5 microns (section 0007). The superfine particles may be deposited on the grain boundaries of the active material particles, and thus are adhered to the surfaces thereof (sections 0006 and 0018). The superfine particles may comprise as little as 0.1 percent of the electrode, thus at least overlapping part of the ranges of claims 2 and 5 (section 0009). Claim 5 is interpreted as further limiting the size of the carbon particles, but still open to the presence of the oxide particles as well as carbon particles, and

Art Unit: 1745

would thus still be met by a reference which discloses oxide particles. The stoichiometric relationships within the formulas of claims 6-8 would be met by the cathode materials LiMn_2O_4 , Li_xMnO_2 , LiCoO_2 and LiNiO_2 , all listed in section 0008. An English translation of this *kokai*, obtained from the website of the Japanese patent office, is enclosed.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki *et al.* (JP 6-236,756) in view of Yomo (JP 4-162,357).

Suzuki *et al.*, as mentioned above, disclose positive and negative electrodes, and a nonaqueous electrolyte, but do not mention a separator or a housing for their cell. Yomo discloses a cell with a lithium transition metal oxide cathode, which also includes a separator (7) and a housing (6). Because these are conventionally basic battery parts, and because Yomo shows them as being useful with a lithium transition metal oxide cathode, the same type as disclosed by Suzuki *et al.*, it would be obvious to use the separator and housing disclosed by Yomo as parts of the cell of Suzuki *et al.*

Art Unit: 1745

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Takeuchi *et al.* (US 5807645) and Koksang (US 5,512,214) disclose transition metal oxide cathode mixtures containing carbon.

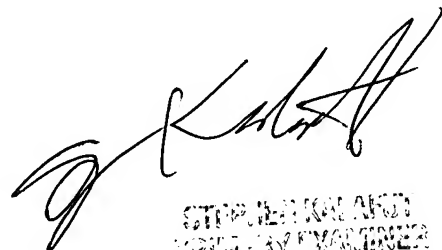
The disclosure is objected to because of the following informalities: Drawing numeral 16 is not found in the specification. On page 22, second line from the bottom, "11are" should be "11 are". Likewise, near the center of page 23, "19is" should be "19 is". Appropriate correction is required.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen J. Kalafut whose telephone number is (703) 308-0433. The examiner can normally be reached on M-F 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick J. Ryan can be reached on (703) 308-2383. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

sjk
June 15, 2003


STEPHEN J. KALAFUT
PATENT EXAMINER
CEN 3P
1700